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# THE FERTILIZER SUPPLY 1967-68

**NITROGEN**

**PHOSPHATE**

**POTASH**

*Fertilizer Supply*  
1. 9424  
M2F41



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Agricultural Stabilization and Conservation Service  
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Prepared by

John N. Mahan, fertilizer specialist

Defense Activities Staff

Agricultural Stabilization and Conservation Service

U. S. Department of Agriculture

Washington, D. C. 20250

General Situation

The U. S. supply of fertilizer materials for 1967-68 will amount to 16 million tons of primary plant nutrients -- nitrogen (N), phosphate ( $P_2O_5$ ), and potash ( $K_2O$ ). This is 8 percent more than last year's supply and over twice the quantity consumed in 1962-63.

Net supplies of nitrogenous materials will total 7,164,000 tons of N, up 16 percent from last year; phosphatic materials 4,948,000 tons of  $P_2O_5$ , up 9 percent; and potash for fertilizers 3,848,000 tons of  $K_2O$ , down 5 percent from last year.

Countries in which the Agency for International Development (AID) has active agricultural programs received 57 percent of the plant nutrients exported by the U. S. in 1966-67. They received 58 percent of the N, 77 percent of the  $P_2O_5$  (excluding phosphate rock), and 31 percent of the  $K_2O$ . Exports are expected to gain over last year in phosphate rock, anhydrous ammonia and materials needed by AID. AID requirements are greatest for ammonium phosphates, mixed fertilizers, and where possible urea as a replacement for ammonium sulfate.

Industry representatives were more pessimistic in mid-winter than they had been in the last decade. The tight supply in nitrogen had ended, although delays in construction and operating difficulties have been encountered with the new anhydrous ammonia plants. Phosphate production had not increased in the same proportion as capacity because of inventory levels at the beginning of the year and limited storage capacity. Potash shipments had been slowed because of inventories in the field.

Ability to deliver fertilizers at the time and in the form demanded by farmers is a critical problem. This means that large quantities have to be pre-positioned in consuming areas. Weather conditions can have a tremendous impact on the quantities of fertilizers sold. Favorable weather for an extended period means that planting will have been started and completed in a short time. Fertilizer supplies available locally are used with only limited replacement because of the distance from primary sources. Interruption of planting owing to rain provides time for partial refilling of distribution channels and results in increased fertilizer sales.

Nitrogen (N)

The supply of nitrogenous materials for domestic fertilizer use will total 7,164,000 tons of nitrogen (N), an increase of 16 percent over

1/ The fertilizer year is from July 1 through June 30.

last year (table 1). The supply from domestic sources will be up 18 percent. Increased AID requirements will take a larger share of anhydrous ammonia than last year for conversion into materials for shipment to developing countries.

Production -- U. S. production of anhydrous ammonia in 1967-68 is expected to be 13.1 million tons, 15 percent more than last year. Anhydrous ammonia for direct application and formulation of mixed fertilizers will be up 25 percent over 1966-67. Supplies of nitrogen solutions will be up 14 percent. Total liquids will make up 65 percent of the supply from domestic production. Supplies of solid ammonium nitrate and ammonium nitrate-limestone mixtures will be 7 percent larger than last year. Ammonium sulfate will increase 3 percent, and solid urea 20 percent. Other solid nitrogenous materials, largely ammonium phosphates, will increase 28 percent.

Imports -- Imports of nitrogen will total 729,000 tons of N, 9 percent more than last year. Anhydrous ammonia imports will increase 31 percent over last year. Urea and sodium nitrate are expected to be reduced sharply from last year. Ammonium nitrate and ammonium phosphates, primarily from Canada, will be about the same level as last year.

Exports -- Nitrogen exports are expected to total 998,000 tons, up 33 percent over 1966-67. Ammonium nitrate and ammonium sulfate will decline. Urea and anhydrous ammonia will more than double. Other products, primarily ammonium phosphates, will be 14 percent greater than last year.

Nitrogen capacities -- Anhydrous ammonia capacity on January 1, 1968, is estimated at 16,586,000 tons of  $\text{NH}_3$ , an increase of 3,226,000 tons during 1967 (table 2). It is expected to be 20,031,000 tons by 1970 if announced construction of new plants and expansions are brought

Table 2. -- U. S. anhydrous ammonia capacity: Number of plants and estimated production capacity, 1966-70 1/

	Unit	1966	1967	1968	1969	1970
Plants .....	number	88	98	105	111	115
Plant capacity, : 1,000	:	:				
January 1 .....	short tons	11,042	13,360	16,586	18,771	20,031
Plant start-up : 1,000	:	:				
during year ...	short tons	2,318	3,226	2,185	1,260	---

1/ Includes projected expansions and new construction.

Table 1. -- NITROGEN: Estimated supply of nitrogen for fertilizer purposes. United States and possessions, 1966-67 and 1967-68

Item	1966-67 1/	1967-68
	1,000 short tons	1,000 short tons
<u>Supply from domestic production:</u>		
Solids:		
Ammonium nitrate 2/ 3/ .....	830	887
Ammonium sulfate 3/ .....	557	577
Urea .....	380	459
All other solids 4/ .....	521	670
Total solids .....	2,288	2,593
Liquids:		
Ammonia (including aqua) .....	2,669	3,338
All other .....	1,320	1,502
Total liquids .....	3,989	4,840
Total (solids and liquids) ....	6,277	7,433
<u>Imports:</u>		
Ammonium nitrate .....	58	61
Ammonium sulfate .....	36	34
Urea 3/ .....	99	84
Sodium nitrate .....	43	26
Ammonia (including aqua) .....	322	422
Nitrogen solutions .....	25	16
All other .....	86	86
Total .....	669	729
<u>Exports:</u>		
Ammonium nitrate .....	25	7
Ammonium sulfate .....	271	192
Urea .....	31	78
Ammonia (including aqua) .....	212	481
All other .....	210	240
Total .....	749	998
NET DOMESTIC SUPPLY .....	6,197	7,164

1/ Revised.

2/ Includes ammonium nitrate and ammonium nitrate-limestone mixtures.

3/ Adjusted for estimated quantity going into non-fertilizer uses.

4/ To avoid duplication the figure for "all other solids" has been adjusted by the estimated amount of imported ammonia used in primary materials.

into production on or near target dates. These estimates are based on published capacities and current information on construction schedules.

Urea capacity is estimated to have been 3,573,000 tons of material on January 1, 1968. Three plants due on stream by early 1969 will add another 980,000 tons. Ammonium nitrate capacity is estimated to be 7.3 million tons of material divided about 56 percent solid and 44 percent liquid. Total ammonium sulfate capacity is about 3.3 million tons of material. Production of nitrogen solutions demonstrate an ability to turn out 1.7 million tons on the basis of 100 percent N.

#### Phosphates (P<sub>2</sub>O<sub>5</sub>)

Net domestic supplies of P<sub>2</sub>O<sub>5</sub> in 1967-68 are expected to total 4,948,000 tons, 9 percent more than in 1966-67 (table 3). Exports will be nearly four times imports.

Normal superphosphate -- Normal and enriched superphosphates will decline about 4 percent from last year. Imports of these materials are negligible. Exports will be about one-third less than last year.

Concentrated superphosphate -- Concentrated superphosphate supplies will be 6 percent larger than in 1966-67. Imports will be twice those of last year, and exports will be down 8 percent.

Ammonium phosphates -- Ammonium phosphate supplies will be 35 percent larger than last year. Imports, primarily from Canada, will be up 17 percent. Exports will increase 16 percent over 1966-67.

Phosphoric acid -- Supplies of wet-process phosphoric acid for fertilizer use will total 3.6 million tons of P<sub>2</sub>O<sub>5</sub> this fertilizer year. This acid will be used for direct application and in producing concentrated superphosphate, ammonium phosphates, solid mixed fertilizers, superphosphoric acid, and in turn materials made from this acid. Superphosphoric acid is being used to produce significant quantities of liquid base N-P materials for the liquid mixed fertilizer industry.

Direct application of ammonium phosphates -- Direct application of selected ammonium phosphate grades totaled 1,921,701 tons in 1965-66, latest year for which data on these grades are available (table 4). Significant is the growth in 10-34-0 and 11-37-0 which are ammonium polyphosphates made from superphosphoric acid and anhydrous ammonia. The 18-46-0 strengthened its position as the leading material for direct application.

Ammonium phosphates, as the term is commonly used, include monoammonium and diammonium phosphates, mixtures of the two or combinations with ammonium nitrate and/or ammonium sulfate. The term may need to become

Table 3. -- PHOSPHATE: Estimated supply of P<sub>2</sub>O<sub>5</sub> for fertilizer purposes, United States and possessions, 1966-67 and 1967-68.

Item	1966-67 1/	1967-68
Supply from domestic production:		
Normal and enriched superphosphate ....	1,000 short tons	1,000 short tons
Concentrated superphosphate .....	1,182	1,134
Ammonium phosphate 2/ .....	1,560	1,650
All other 3/ .....	1,430	1,931
	1,000	843
Total .....	5,172	5,558
Imports:		
Concentrated superphosphate .....	27	56
Ammonium phosphate .....	83	98
All other .....	55	59
Total .....	165	213
Exports:		
Normal superphosphate .....	18	12
Concentrated superphosphate .....	305	281
Ammonium phosphate .....	427	493
All other .....	37	37
Total .....	787	823
NET DOMESTIC SUPPLY .....	4,550	4,948

1/ Revised.

2/ Liquid and solid ammonium phosphates excluding those combined with potash salts in the process of manufacture.

3/ Includes nitric phosphates, sodium phosphate, wet base goods, natural organics, phosphate rock, colloidal phosphate, basic slag, estimates of wet and furnace phosphoric acid for liquid and solid mixed fertilizers and direct application, and ammonium phosphates combined with potash salts in process of manufacture.

Table 4. -- Ammonium phosphates: U. S. consumption of selected grades for direct application, alternate fertilizer years 1959-60 through 1964-65, and 1965-66

Grade	1959-60	:	1961-62	:	1963-64	:	1964-65	:	1965-66
	short tons	:	short tons						
10-34-0	---	:	---	:	16,995	:	44,670	:	52,020
11-37-0	---	:	---	:	10,766	:	15,277	:	34,391
11-48-0	116,383	:	138,669	:	162,594	:	159,653	:	187,146
13-39-0	51,186	:	39,604	:	21,123	:	14,074	:	10,578
16-20-0	378,335	:	463,551	:	515,922	:	494,214	:	518,026
16-48-0	53,959	:	151,455	:	188,667	:	145,890	:	115,999
18-36-0	11,875	:	10,625	:	---	:	---	:	---
18-46-0	20,388	:	81,253	:	338,571	:	504,481	:	787,264
21-53-0	30,881	:	39,068	:	32,007	:	29,985	:	35,811
23-23-0	12,910	:	19,079	:	18,276	:	21,443	:	23,673
24-20-0	13,822	:	20,319	:	16,149	:	12,418	:	---
27-14-0	24,778	:	37,666	:	33,775	:	21,611	:	31,241
29-14-0	---	:	---	:	32,587	:	55,519	:	63,218
30-10-0	13,601	:	35,599	:	68,745	:	61,377	:	62,334
Total	728,118	:	1,036,888	:	1,456,177	:	1,580,612	:	1,921,701
N content 1/	117,973	:	173,660	:	251,186	:	273,320	:	332,531
P <sub>2</sub> O <sub>5</sub> content 1/	217,977	:	326,608	:	486,094	:	544,137	:	689,675

1/ N and P<sub>2</sub>O<sub>5</sub> contents calculated.

"Consumption of Commercial Fertilizers and Primary Plant Nutrients in the United States," Statistical Reporting Service, U. S. Department of Agriculture.

even more inclusive as ammonium polyphosphates, urea-ammonium phosphates and other N-P combinations are added.

Table 4 does not include all ammonium phosphate grades. Furthermore, some N-P grades can be produced by mixing N and P<sub>2</sub>O<sub>5</sub> source materials other than anhydrous ammonia and phosphoric acid, or by other chemical processes. The 16-20-0 is a good example of a material which is not necessarily an ammonium phosphate.

Phosphate capacities -- Current capacity to produce normal superphosphate is estimated to total 2 million tons of P<sub>2</sub>O<sub>5</sub>.

Concentrated superphosphate capacity is about 2.4 million tons of P<sub>2</sub>O<sub>5</sub>, double what it was in 1962.

Ammonium phosphate capacity is 3.4 million tons of P<sub>2</sub>O<sub>5</sub>, over twice that in 1965.

Wet process phosphoric acid capacity amounted to 5.7 million tons of P<sub>2</sub>O<sub>5</sub> on January 1, 1968. This capacity will grow to 6.5 million tons of P<sub>2</sub>O<sub>5</sub> by the end of 1969.

Modern plants recently built are complexes capable of producing whatever type of concentrated phosphatic material that is in demand or can be changed to such production in a short time. The above capacities are based on current operations. Shifts in the kinds of fertilizers produced in order to meet market requirements should change estimates of capability to produce the various phosphatic fertilizer materials.

#### Potash (K<sub>2</sub>O)

Net domestic supplies of potash in 1967-68 are expected to be 3,848,000 tons of K<sub>2</sub>O, 5 percent less than last year (table 5). Imports will increase 8 percent over last year and exports will increase 6 percent.

Potassium chloride -- Supplies of domestic potassium chloride (muriate of potash) are expected to be 10 percent less than last year, totaling 2,557,000 tons of K<sub>2</sub>O. One producer stopped production and another cut its labor force about one-half but off-setting this somewhat is the increased production by three other producers.

Imports are expected to reach 1,717,000 tons of K<sub>2</sub>O, 11 percent more than last year. Exports are expected to be 6 percent more than last year.

Potassium sulfates -- Domestic deliveries of potassium sulfate and potassium magnesium sulfate are down 13 percent from last year. Imports will be about the same but exports are expected to be down 40 percent from last year.

Table 5. -- POTASH: Estimated supply of K<sub>2</sub>O for fertilizer purposes, United States and possessions, 1966-67 and 1967-68.

Item	1966-67 <sup>1/</sup>	1967-68
	1,000 short tons	1,000 short tons
<u>Supply from domestic production:</u>		
Potassium chloride .....	2,839	2,557
Potassium sulfate <sup>2/</sup> .....	222	194
All other .....	35	35
Total .....	3,096	2,786
<u>Imports:</u>		
Potassium chloride .....	1,547	1,717
Potassium sulfate <sup>2/</sup> .....	30	31
All other .....	66	31
Total .....	1,643	1,779
<u>Exports:</u>		
Potassium chloride .....	581	627
Potassium sulfate <sup>2/</sup> .....	71	43
All other .....	26	47
Total .....	678	717
NET DOMESTIC SUPPLY .....	4,061	3,848

<sup>1/</sup> Revised.

<sup>2/</sup> Includes potassium-magnesium sulfate.

Potash capacities -- U. S. potash production capability, as of January 1, 1968, is estimated at 3,895,000 tons of K<sub>2</sub>O. One plant closed and another cut back about 50 percent in 1967. Three other companies increased production capability during the year to reduce the net loss to 450,000 tons of K<sub>2</sub>O.

Canadian capacity is estimated to have been 2.9 million tons of K<sub>2</sub>O at the beginning of this year and will reach 4.4 million by the end of the year. By 1971, capacity will have climbed to 7.3 million tons of K<sub>2</sub>O from nine companies. Seven of the companies are wholly or partly owned by U. S. firms.

#### Inventories

Stocks of nitrogenous and phosphatic fertilizers have increased over the last three years, stocks built up in readiness for the rush season and those on hand at the end of the year (table 6). The nitrogenous materials include in-plant and out-plant inventories held by primary producers. Anhydrous ammonia stocks reflect an expansion in storage capacity along with increased production capability. Changes in stocks of the other nitrogenous materials were less pronounced.

Wet process phosphoric acid stocks ahead of the rush season and at the end of the season have about doubled. Normal and enriched superphosphate holdings were essentially the same each year while total stocks of P<sub>2</sub>O<sub>5</sub> increased more than 50 percent. The increases were in concentrated superphosphate and ammonium phosphate inventories. Plant and terminal storage facilities have been built to accommodate more efficient operation of jumbo plants, in order to take advantage of more economical transportation and to make adequate quantities available in the heavy consuming areas during the rush season. Recent developments in water transportation, unit train shipments and pipelines indicate that adequate storage is necessary in order to take full advantage of the best transportation services. These developments may mean that 1967 inventory levels may become the rule.

#### Foreign Trade in Fertilizers

The United States had been a net importer of nitrogen (N) in all recorded history until 1966 except for 1947, 1948, and 1949. The net export balance in those years resulted from United States efforts in the "Food for Peace Program" following World War II. The net export balance beginning in 1965-66 resulted from increased emphasis on the use of fertilizers by the Agency for International Development (AID) Programs (table 7). Chilean sodium nitrate, calcium nitrate, and calcium cyanamide formerly made up a large share of the imports but have been replaced by ammonium nitrate, urea, anhydrous ammonia and ammonium phosphates.

Prior to 1941 the United States shifted back and forth from an import to an export balance in phosphates (P<sub>2</sub>O<sub>5</sub>). Since 1941 an export

Table 6. -- End-of-month inventories of selected fertilizer materials: December, February and June, 1965 to 1967

Material	Unit	December		February		June	
		1965	: 1966	1965	: 1966	1965	: 1967
Anhydrous ammonia . . .	Tons of material	766,196	1,088,590	1,682,296	772,713	1,162,824	1,366,843
Ammonium nitrate, solid . . . . .	"	199,051	181,345	328,017	259,520	263,080	236,374
Ammonium sulfate . . . . .	"	349,974	252,450	295,646	253,389	271,308	259,536
Ammonium sulfate coke oven . . . . .	"	183,900	99,564	152,085	172,506	163,111	120,662
Nitrogen solutions . . .	Tons of N	194,444	203,079	264,718	208,096	258,389	249,243
Phosphoric acid wet process . . . . .	Tons of P <sub>2</sub> O <sub>5</sub>	55,486	89,126	96,274	39,886	61,384	94,115
Total phosphates . . . . .	"	469,181	624,052	720,150	394,933	548,066	636,671
Normal & enriched superphosphate . . . . .	"	175,646	162,347	186,086	190,534	181,285	166,986
Concentrated superphosphate . . . . .	"	161,291	266,085	283,673	119,693	183,822	284,696
Ammonium phosphates .	"	116,046	171,834	221,444	71,749	160,673	159,667
Other phosphates . . . . .	"	16,198	23,786	28,947	12,957	22,286	23,322

Table 7. -- U. S. imports and exports of primary plant nutrients 1940 through 1967-68 (1,000 tons)

Year	N		P <sub>2</sub> O <sub>5</sub>		K <sub>2</sub> O	
Calendar year:	Imports	Exports	Imports	Exports	Imports	Exports
1940	189	57	44	45	115	63
1941	165	35	63	52	13	57
1942	189	16	35	60	3	49
1943	208	28	36	92	17	70
1944	215	12	55	60	4	69
1945	254	28	33	64	4	68
1946	203	86	34	87	3	66
1947	203	258	38	93	25	68
1948	224	270	38	117	26	70
1949	233	320	45	137	18	70
1950	262	236	38	112	194	65
1951	338	72	56	168	308	69
Fertilizer year:						
1951-52	290	73	39	94	264	63
1952-53	429	44	41	74	159	54
1953-54	421	62	62	88	121	54
1954-55	373	141	61	154	139	91
1955-56	330	255	56	153	170	180
1956-57	294	268	54	256	179	315
1957-58	305	227	59	246	213	252
1958-59	294	223	64	204	238	310
1959-60	298	188	82	177	282	418
1960-61	276	213	67	238	285	484
1961-62	337	234	87	283	282	503
1962-63	344	196	117	275	486	411
1963-64	453	264	100	400	691	526
1964-65	470	392	98	432	884	625
1965-66	529	546	125	441	1,332	664
1966-67	669	749	165	787	1,643	678
1967-68*	729	998	213	823	1,779	717

\* Estimated

balance has been maintained becoming more pronounced as AID requirements increased.

United States potash production was over one-half million tons of K<sub>2</sub>O for the first time in 1941, at which time exports exceeded imports and continued thus through 1949. Imports were larger than exports in 1950 and continued to be so through 1955-56. Exports exceeded imports then for a period of six years, until Canadian potash production shifted the balance to imports.

Canada is the major source of U. S. fertilizer imports (table 8). Calcium nitrate, anhydrous ammonia, potassium sulfate, potassium sodium nitrate and sodium nitrate are the only important fertilizer imports for which Canada is not the main source.

Potassium chloride and anhydrous ammonia imports have increased since 1962-63 (table 9). Imported anhydrous ammonia is mostly from the Caribbean area primarily for use in Florida and Atlantic Coast finishing plants. The increased quantities of potassium chloride are a result of development of potash deposits in Canada involving a number of firms also engaged in fertilizer production in the U. S. Imports of lower analysis materials are declining.

Phosphate rock exports totaled 10,128,028 tons in 1966-67 with Canada and Japan each taking over two million tons (table 10). Japan was also an important market for potassium chloride. Countries with active AID agricultural programs took 93 percent of the ammonium sulfate, about two-thirds of it to India. They also got 65 percent of the urea, 79 percent of the concentrated superphosphate, 31 percent of the potassium chloride, 78 percent of the ammonium phosphates and 84 percent of the mixed fertilizers.

U. S. exports of phosphate rock more than doubled from 1962-63 to 1966-67 (table 11). The jump in ammonium sulfate tonnage in 1966-67 was primary because of AID procurement. Urea showed a marked gain. Concentrated superphosphate, ammonium phosphate, potassium chloride and mixed fertilizers all increased over the previous year.

Table 8. -- U. S. imports of selected fertilizer materials by country of origin 1966-67 1/

Country of origin	Ammonium : sulfate	Ammonium : nitrate	Calcium : 32% & over	Urea : nitrate	Anhydrous : ammonia	Phosphate : crude	Potassium : chloride	Potassium : sulfate	Sodium : nitrate	Potassium : materials	Other
	short tons	short tons	short tons	short tons	short tons	short tons	short tons	short tons	short tons	short tons	short tons
Canada	159,815	164,672	---	117,111	65,217	84	2,182,212	320	147	16,630	
Mexico	651	---	---	52	---	31,499	---	---	---	---	61
Trinidad & Tobago	---	---	---	43,311	282,683	---	---	---	---	---	
Netherlands Antilles	9,602	---	---	19,233	22,940	134,169	---	---	---	---	
Columbia	---	---	---	---	21,662	---	3,000	---	---	---	
Chile	---	---	---	---	---	---	5,519	---	46,897	---	
Norway	---	41,653	56,990	---	---	---	---	---	---	---	11
Netherlands	5,842	2,673	2,856	---	---	---	14,697	2,315	---	---	
Belgium & Luxembourg	---	20	24,805	---	---	---	134,358	11,012	3,559	---	
France	---	25	2,565	---	---	49	185,197	32,629	---	---	11
West Germany	4,263	4,351	280	---	---	---	30,149	3,362	---	---	5
Spain	---	---	---	---	---	---	---	11,078	---	---	
Italy	---	---	---	7,125	---	3,000	---	---	---	---	50
Japan	10	---	---	---	---	---	19,368	---	---	---	
Israel	---	---	110	829	---	---	3,689	---	---	1,375	
Total	170,581	174,274	48,832	275,157	392,502	168,801	2,578,189	60,716	50,603	18,143	

1/ Other materials imported, mainly from Canada, were the following: 19,749 tons calcium cyanamide, 82,472 tons nitrogen solutions, 193,984 tons ammonium phosphates, 175,133 tons mixed fertilizers, 25,787 tons liquid phosphatic fertilizers and 63,247 tons of solid phosphatic fertilizer; also, 270,783 tons nitrate of soda from Chile. Other products were 24,519 tons potassium nitrate, 1,480 tons ammonium nitrate-limestone and 21,445 tons of nitrogenous fertilizers.

Table 9. -- U. S. imports of selected fertilizer materials, fertilizer years 1962-63 to 1966-67 inclusive

Material	:	:	:	:	:	:
	1962-63	1963-64	1964-65	1965-66	1966-67	
	short ton					
Anhydrous ammonia .....	---	90,803	177,747	258,179	392,502	
Ammonium nitrate 32% & over:	254,524	217,735	180,069	178,435	174,274	
Ammonium nitrate-limestone..:	65,702	49,549	3	1,580	1,480	
Ammonium sulfate .....	225,553	227,704	192,819	153,324	170,581	
Sodium nitrate .....	378,825	396,958	366,363	363,273	270,783	
Calcium nitrate .....	48,460	55,001	40,312	31,805	48,832	
Urea .....	213,886	280,416	246,342	201,611	275,157	
Calcium cyanamide .....	33,987	28,320	22,074	18,839	19,749	
Nitrogen solutions .....	73,559	82,042	73,685	80,358	82,472	
Synthetic nitrogenous material n.e.c. ....	60,803	18,798	19,455	22,699	21,445	
Phosphate, crude .....	172,230	187,756	160,077	149,472	168,801	
Ammonium phosphates .....	153,850	106,432	111,579	182,170	193,984	
Potassium chloride .....	682,864	1,043,303	1,399,281	2,142,266	2,578,189	
Potassium sulfate .....	117,952	94,628	56,098	52,918	60,716	
Potassium-sodium nitrate ...	29,894	29,533	10,723	23,250	50,603	
Mixed fertilizers .....	162,184	146,052	160,076	186,240	175,133	

Table 10-- U. S. exports of selected fertilizer materials by destination, 1966-67 1/

Country of destination	Anhydrous sulfate : ammonia	Anhydrous sulfate : ammonium	Ammonium sulfate	Ammonium nitrate	Urea	Phosphate : rock (all)	Phosphate : super-phosphate	Potassium : chloride	Ammonium phosphate	Mixed fertilizers
	short tons	short tons	short tons	short tons	short tons	short tons	short tons	short tons	short tons	short tons
Canada .....	17,600	7,046	17,933	7,386	2,563	303	76,602	29,870	6,722	65,158
Mexico .....	21,040	155,851	4,584	2,462	366,586	---	14,516	33,053	5,291	8,304
El Salvador 2/ .....	3,638	17	---	---	8,553	---	11	4,414	16,796	9,600
Costa Rica 2/ .....	---	---	---	24	1,677	1,939	2,545	16,727	11,874	12,022
Central America, Other 2/ .....	247	126	96	1,681	74	12	49	1,638	17,096	10,143
West Indies, British .....	3,655	35,784	1,217	1,63	1,261	1,082	3,365	9,414	5,654	7,467
Dominican Republic 2/ .....	10,118	20	8	502	641	1,071	5,382	4,000	390	2,817
West Indies, Other .....	---	12	72	---	175	391	---	10,396	6,455	458
Columbia 2/ .....	354	---	68	2,444	21,653	5,561	22,476	18,975	54,151	9,956
Ecuador 2/ .....	---	260	71	8	---	4,085	3,529	8,217	2,806	---
Peru 2/ .....	11	5,937	---	3,180	---	568	551	1,879	501	6
Chile 2/ .....	34	2,566	---	7,716	---	157	103	14,341	1,106	---
Brazil 2/ .....	27,137	---	---	475	171,084	2,122	65,552	48,790	40,526	---
Uruguay 2/ .....	---	---	---	37,547	---	---	10	1,875	9	9
South America, Other .....	6,194	739	757	---	14,720	1,749	17,596	1,749	1,023	---
Sweden .....	---	---	---	49,584	---	---	4,880	---	---	---
Denmark .....	8,772	---	---	11,305	---	---	---	---	---	18
United Kingdom .....	26,952	---	---	385,330	---	---	996	11	317	---
Netherlands .....	131	---	26	---	101,300	---	47,498	---	3,374	51
Belgium & Luxembourg .....	---	---	7	40,712	---	---	69	---	---	41
France .....	30	---	---	102	155,288	---	2,224	7,143	30	30
West Germany .....	---	3	27	1,265,948	---	11	---	826	1,224	---
Austria .....	---	---	---	61,634	---	---	---	---	---	---
Spain .....	---	---	106	298,035	---	---	---	11,686	19	19
Italy .....	---	---	102	1,134,524	---	---	---	34,004	65	65
Greece .....	---	31,459	116	---	---	---	---	27,287	---	41
Romania .....	---	---	---	89,206	---	---	---	7,960	6,475	481
Europe, Other .....	9,238	11	162	24,831	---	---	22	---	---	12
India 2/ .....	834,024	---	38,967	60,323	---	1,422	---	565,987	33,730	---
Pakistan 2/ .....	269,638	2	---	17	---	79,898	15,721	4	---	1
Ceylon 2/ .....	48,824	---	---	---	---	---	---	---	31	---
Thailand 2/ .....	---	10	---	31	7	30	20	14,131	481	481
South Viet Nam 2/ .....	5,583	392	---	58,302	---	---	7,960	6,475	83,799	83,799
Rep. of the Philip- pines 2/ .....	51	5	417	59,166	---	186,405	5,547	500	43	43
Rep. of Korea 2/ .....	---	---	---	89,604	---	7,107	156,894	22	---	---
Japan .....	39	---	---	2,029,907	---	5,741	40,041	6,943	56	56
Asia, Other .....	47	30	1,609	876	20,517	16	11,877	7,335	3,036	3,036
Australia .....	13,776	13,656	2,188	756,302	---	---	119,748	17,178	257	257
New Zealand .....	784	---	5	101	237,757	---	13,223	38,188	2,565	5,959
Oceania, Other .....	---	---	55	5	53	---	---	31	135	135
UAR (Egypt) .....	32,698	---	---	11,172	3,177	---	---	---	---	---
Sudan .....	---	---	---	11	11,411	---	25,717	652	4	4
Rep. of South Africa .....	20	---	220	296	726	166	---	20	71	845
Africa, Other .....	1,210	266	220	296	74,928	10,128,028	89,015	663,801	955,289	186,215
Total .....	1,290,944	258,224	74,928	68,028	10,128,028	89,015	663,801	955,009	955,289	186,215
Amount to AID countries 1,199,614	617	9,352	44,195	519,352	10,705	525,526	299,117	741,029	156,998	156,998
% to AID countries .....	93	---	12	65	5	12	79	31	78	84

1/ Other exports: 468 tons of nitrate of soda; 22,723 tons nitrogenous chemical fertilizers, n.e.c.; 29,437 tons organic materials; and 142,435 tons of potassic fertilizer materials n.e.c.

2/ Countries with active AID agricultural programs, all quantities not necessarily financed by AID.

Table II.-- U. S. exports of selected fertilizer materials, fertilizer years 1962-63 to 1966-67 inclusive

Material	: 1962-63	: 1963-64	: 1964-65	: 1965-66	: 1966-67
	<u>: short ton</u>				
Anhydrous ammonia .....	50,243:	81,543:	124,069	131,486	258,224
Ammonium nitrate .....	26,764:	39,173:	116,828	85,258	74,928
Ammonium sulfate .....	485,900:	413,451:	644,210	412,074	1,290,944
Sodium nitrate .....	1,499:	1,794:	569	670	468
Urea .....	24,769:	44,446:	41,783	38,313	68,028
Synthetic nitrogenous materials n.e.c. ....	9,486:	45,847:	47,395	24,552	22,723
Phosphate rock .....	4,930,901:	6,663,973:	7,072,641	8,288,754	10,128,028
Normal superphosphate .....	120,367:	154,289:	130,102	85,111	89,015
Concentrated superphosphate:	438,964:	579,391:	584,129	563,032	663,801
Ammonium phosphate .....	122,419:	274,291:	368,912	461,520	955,289
Potassium chloride .....	637,736:	804,779:	895,495	955,272	968,009
Potassium sulfates .....	35,411:	50,943:	128,405	158,747	142,435
Mixed fertilizers .....	87,656:	164,881:	214,967	107,159	186,915

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\* \* \*

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